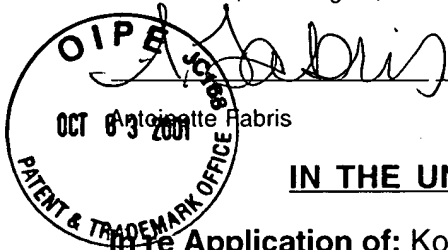


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Date of Deposit: October 3, 2001

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D. C. 20231.



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:** Koller et al.

**Docket No.:** STAN0001

**Serial No.:** 09/922,324

**Art Unit:** 2171

**Filed:** August 2, 2001

**Examiner:** UNASSIGNED

**Title:** Method and Apparatus for Learning Probabilistic Relational Models Having Attribute and Link Uncertainty and for Performing Selectively Estimation Using Probabilistic Relational Models.

October 3, 2001

**REQUEST FOR CORRECTED FILING RECEIPT**

Assistant Commissioner for Patents  
Application Processing Division  
Customer Correction Branch  
Washington, DC 20231

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OCT 19 2001  
Group 2100

Dear Sir:

Applicant, by his attorney, requests correction of the Filing Receipt for the above-referenced patent application. The title is incorrect. Please change the title from "Method and Apparatus for Learning Probabilistic Relational Models Having Attribute and Link Uncertainty and for Performing Selectively Estimation Using Probabilistic Relational Models" to - - Method and Apparatus for Learning Probabilistic Relational Models Having Attribute and Link Uncertainty and for Performing Selectively Estimation Using Probabilistic Relational Models - -. Please note that the word **uncertainty** is mis-spelled on the original filing receipt. A copy of the Applications first page and Declaration are enclosed, as well as a copy of the original Filing Receipt, with the incorrectly spelled word underlined.

Respectfully submitted,

Michael A. Glenn  
Reg. No. 30,176

**Customer No. 22862**



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correct

# Method and Apparatus for Learning Probabilistic Relational Models Having Attribute and Link Uncertainty and for Performing Selectivity Estimation Using Probabilistic Relational Models

5

This invention was made with Government support under contract N66001-97-C-8554, awarded by the Space and Naval Warfare Systems Center and  
10 N00014-97-C-8554, awarded by the Office of Naval Research. The Government has certain rights in this invention.

## BACKGROUND OF THE INVENTION

15

### TECHNICAL FIELD

The invention relates to statistical models of relational databases. More particularly, the invention relates to a method and apparatus for learning probabilistic relational models with both attribute uncertainty and link  
20 uncertainty and for performing selectivity estimation using probabilistic relational models.

### DESCRIPTION OF THE PRIOR ART

25 Relational models are the most common representation of structured data. Enterprise business information, marketing and sales data, medical records,



Attorney Docket No. STAN0001

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Group 2100

Applicant or Patentee: Daphne Koller, Lise Getoor, Avi Pfeffer, Nir Friedman, Ben Taskar.

Serial No.: Not Assigned Filing Date: Herewith

Patent No.: \_\_\_\_\_ Issued: \_\_\_\_\_

For: METHOD AND APPARATUS FOR LEARNING PROBABILISTIC RELATIONAL MODELS  
HAVING ATTRIBUTE AND LINK UNCERTAINTY AND FOR PERFORMING SELECTIVITY  
ESTIMATION USING PROBABILISTIC RELATIONAL MODELS

→ correct

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
37 CFR 1.9(f) and 1.27(b) - NONPROFIT ORGANIZATION

NAME OF ORGANIZATION Board of Trustees of the Leland Stanford Jr. University  
ADDRESS OF ORGANIZATION 900 Welch Road, Palo Alto, Ca 94304

TYPE OF ORGANIZATION

☒ (X) University Or Other Institution Of Higher Education

☐ ( ) Tax Exempt Under Internal Revenue Service Code 26 Usc 501(A) And 501 (C) (3)

☐ ( ) Nonprofit Scientific Or Educational Under Statute Of State Of The United States Of America -

Name Of State \_\_\_\_\_  
Citation Of Statute \_\_\_\_\_

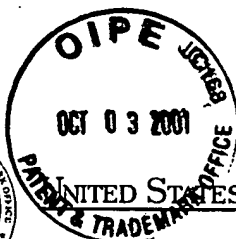
☐ ( ) Would Qualify As Tax Exempt Under Internal Revenue Service Code 26 Usc 501  
(A) And 501 (C) (3) If Located In The United States Of America

☐ ( ) Would Qualify As A Nonprofit Scientific Or Educational Under Statute Of State Of  
The United States Of America -

Name Of State \_\_\_\_\_  
Citation Of Statute \_\_\_\_\_

I hereby declare that the above-identified nonprofit organization qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code,

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled: METHOD AND APPARATUS FOR LEARNING PROBABILISTIC RELATIONAL MODELS HAVING ATTRIBUTE AND LINK UNCERTAINTY AND FOR PERFORMING SELECTIVITY ESTIMATION USING



## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/922,324	08/02/2001	2171	395	STAN0001	12	15	4

CONFIRMATION NO. 7457

22862  
GLENN PATENT GROUP  
3475 EDISON WAY  
SUITE L  
MENLO PARK, CA 94025

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OCT 19 2001  
Group 2100

## FILING RECEIPT



\*OC000000006544131\*

Date Mailed: 09/13/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Daphne Koller, Residence Not Provided;  
Lise Getoor, Residence Not Provided;  
Avi Pfeffer, Residence Not Provided;  
Nir Friedman, Residence Not Provided;  
Ben Taskar, Residence Not Provided;

## Domestic Priority data as claimed by applicant

## Foreign Applications

If Required, Foreign Filing License Granted 09/11/2001

Projected Publication Date: To Be Determined - pending completion of Missing Parts

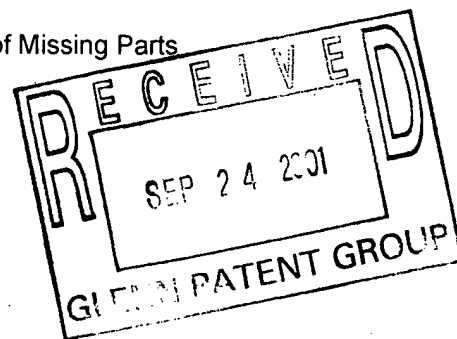
Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

## Title

Method and apparatus for learning probabilistic relational models having attribute and link uncertainty and for performing selectivity estimation using probabilistic relational models



DOCKETED

By: *JP*

Date: 9/28/01



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Bib Data Sheet

**CONFIRMATION NO. 7457**

<b>SERIAL NUMBER</b> 09/922,324	<b>FILING DATE</b> 08/02/2001 <b>RULE</b>	<b>CLASS</b> 707	<b>GROUP ART UNIT</b> 2171	<b>ATTORNEY DOCKET NO.</b> STAN0001
<b>APPLICANTS</b> Daphne Koller, Residence Not Provided; Lise Getoor, Residence Not Provided; Avi Pfeffer, Residence Not Provided; Nir Friedman, Residence Not Provided; Ben Taskar, Residence Not Provided;				
<b>** CONTINUING DATA *****</b>				
<b>** FOREIGN APPLICATIONS *****</b>				
<b>IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY **</b> ** 09/11/2001				
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after met Allowance Verified and Acknowledged Examiner's Signature _____ Initials _____		<b>STATE OR COUNTRY</b>	<b>SHEETS DRAWING</b> 12	<b>TOTAL CLAIMS</b> 15
				<b>INDEPENDENT CLAIMS</b> 4
<b>ADDRESS</b> 22862				
<b>TITLE</b> Method and apparatus for learning probabilistic relational models having attribute and link uncertainty and for performing selectivity estimation using probabilistic relational models				
<b>FILING FEE RECEIVED</b> 395	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	